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ON THE RELATIONS OF THE SEVERAL CLASSES OF DRUGGISTS AND PHARMACISTS TO THE COLLEGES OF PHARMACY*.

By Professor E. Parrish.

The tendency to a division of labor which is seen in the growth of every branch of business, has developed in ours a variety of different occupations. Fifty years ago, when this college was established, almost every considerable drug store had something like a laboratory attached, where some of the few chemicals then in use and all the galenical preparations were made, and where nearly all the crude drugs were assorted, garbled and powdered.

The apprentice enjoyed a wholesome development of muscle through wielding the ponderous pestle, handling the sieves and working the screw press. He learned how to make pills by wholesale, to prepare great jars of extracts and cerates, to bottle castor oil, Turlington's balsam and opodeldoc by the gross, and what he lacked in the number and variety of articles he dealt in, was made up by the greater extent of his operations and the completeness with which, in a single establishment, all the then known processes were practiced. Very many physicians then dispensed their own prescriptions, drawing their supplies from the druggists, but gradually, as the obvious advantages of separating dispensing from prescribing began to be recognized, the separate prescription counter was added to the drug

* Extracted from the Introductory Lecture to the 50th course in the Philadelphia College of Pharmacy.)

store, and in many instances the hands that received and opened the case of rhubarb, opium or assafœtida fresh from off the ship, in turn dispensed these remedies in pill-box or vial to the suffering invalid.

Gradually, as all this has changed, the retail prescription, or as we now call them, dispensing stores became numerous, and the wholesale druggists, glad to lop off the petty details of their retail counters, have ceased to supply the public directly with those small quantities which make up the sum of the retail business.

This state of things is not without many exceptions; even in large cities there are wholesale stores in which the supply of medicines to physicians and retailers is joined with the practice of retailing and even with the compounding of prescriptions, and, as we all know, the distinction becomes less and less, till we reach the class of stores in which the sale of medicines is joined with that of paints and oils, books, hardware or general merchandize, and in which the prescription counter is introduced or omitted, according as the neighboring physicians may or may not have created a demand for it.

The division of labor having given rise to separate wholesale and dispensing stores does not stop here, but the wholesale dealers are subdivided into importers, brokers and jobbers. The importation of heavy and costly drugs employs large capital and calls into activity talent of the first order; it is often conjoined with the jobbing business, but the tendency is to separate it into a distinct pursuit, and indeed to subdivide it among different classes, each selecting a particular line or sometimes even a special article as sufficient to employ the attention and capital of a single house.

The business of the broker is to familiarize himself with the various sources of supply, and to facilitate the distribution of the leading articles among manufacturers and wholesale druggists—a useful and indispensable class in the large cities on the seaboard; they are no doubt heard of for the first time as a class of druggists by many who hear me.

Wholesale druggists or jobbers open the original packages, assort and garble the drugs, and have them reduced to powder or otherwise prepared for the purposes of the retailers, for whom they collect and furnish the vast variety of merchandize for which the public resort to the dispensing store. The modern druggist does not, however, as did his predecessor of the olden time, require to have his own laboratory, he resorts to numerous manufacturers and tradesmen, who have

branched off from his business in its rapid development. Drug brokers wait on him daily with samples of the latest importations; commission houses and herbalists have collected for him the indigenous drugs, tons of which are on storage awaiting a market at home or abroad; manufacturing chemists offer lists which would have astonished the druggist of the last century; manufacturing pharmacists, who are of many kinds, offer extracts, fluid extracts, syrups, elixirs, cordials, pills—plain and sugar-coated, plasters—spread and unspread, perforated and entire, on skins, on cloth, on paper and on silk. The confectioners furnish medicated lozenges, the perfumers offer pomades, essences and colognes; the soap makers a vast variety of plain, scented and medicated soaps.

The dealer and manufacturer are divorced; each follows his own appropriate sphere, and the development of the business is correspondingly great.

Steam has revolutionized pharmacy as it has most other manufacturing pursuits. The pestle and mortar have given way, in powdering, to chasers and mill stones; the steam boiler and jacket have driven out the furnace, digester and still which erst garnished the laboratory of the roomy old drug store, while pharmacy, cramped into a narrow corner shop, where it may meet the people face to face over the dispensing counter, is compelled to stretch its long arms into storehouses, laboratories and factories not a few.

This brief sketch of the subdivisions of "the drug and apothecary business," as it is designated in our diploma, has opened the way for a few remarks on the relations of these subdivisions to the colleges of pharmacy. These colleges, in so far as they are educational in their objects, are designed to fit a corps of young men annually for the varied duties connected with the business of selecting, preparing, and dispensing medicines and the allied substances used in the arts and domestic economy.

I have shown that the druggist, the manufacturing chemist and the pharmacist, with the aid of numerous allies, are all concerned in this business, and, it would appear that they are all under the necessity of scientific instruction to fit them for it.

The lectures on Materia Medica, though indispensable to all these, may be considered especially applicable to the druggist, making him acquainted with the varieties, sensible properties, adulterations and sophistications of drugs and their natural history and commercial re-

lations. Standard specimens are exhibited, their modes of preservation and uses described, and a scientific and practical interest imparted to them which cannot fail to make of the student a more intelligent, appreciative and competent dealer in them.

The chemical course, though most obviously useful to the manufacturing chemist and pharmacist, has a practical interest to the druggist also; in fact the leading principles of this science are so interwoven with every branch of trade and manufactures as to have been incorporated into most general schemes of liberal education. The druggist needs chemistry especially, to open to his view the composition and properties of drugs, and to place within his reach the means of testing their purity and of judging of their quality.

Nor are the lectures on pharmacy, though especially adapted to the manufacturing and dispensing pharmacist, without real utility and importance to the druggist. To judge of the identity, excellence or inferiority of pharmaceutical preparations in which he deals requires knowledge which is closely connected with the processes by which they are made; these processes, too, are very liable to come into use in the course of his business, and the few preparations he has occasion to make will call for scarcely less skill than is demanded in the manufacturing laboratory and dispensing store. Moreover the close relations of all these classes as coadjutors in the general drug trade, make it eminently fitting that their scientific training should be substantially the same.

Yet granting that our colleges should be open to all, the question still remains as to who should be entitled to compete for their honors. By the time-honored regulations of this college the line has been drawn so as to exclude those whose practical training embraces one special department only. No importer, drug broker, drug miller, herbalist or perfumer, who is not at the same time a practicing druggist or pharmacist, would lay claim to send an apprentice here with a view to obtain a diploma; yet we have never drawn a distinction between the jobber and retailer, who we regard as jointly participants in the general traffic in drugs and medicines.

Many of the members of this college, including some of its founders, have originally been wholesale dealers. Some of its leading members, starting as apothecaries, have extended their trade with the growth of the city and the natural increase of their capital, till they have become large importers, jobbers or manufacturers, and yet these are

completely identified with our profession, and naturally desire to introduce their sons and the young men under their care into the places which they have filled, through the channels which the college opens.

continued.)

ON SYRUP OF SENNA.

By J. B. Moore.

This syrup, which was officinal in the U. S. P. of 1850, was omitted in that of 1860, the authors, perhaps, thinking that its place might be supplied by the fluid extract; but, as the syrup has been so long known and used, not only in professional but also in domestic practice, there still exists for it a lingering demand, which is likely to continue. To supply this demand the pharmacist is compelled to keep the syrup constantly on hand; and, as the formula of the U. S. Pharmacopœia of 1850 yielded rather an uncertain preparation, which was very liable to spoil if long kept, I thought I would offer a formula for its preparation which I have used for several years, and which will afford a reliable and permanent syrup. As an evidence of this, I have samples of it which have kept for nearly three years unaltered. The demand for the syrup in some localities being limited, and the fact of its being an unstable preparation as made by the late officinal formula, some pharmacists have been led to the habit of making it, in small quantities, as needed, from the fluid extract; but this practice should not be encouraged, and it is only when the pharmacist makes correctly his own fluid extract, and is sure of its reliable quality, that this mode of preparing the syrup should ever be employed.

The following is the process which I have adopted:

℞.	Pulv. Sennæ, No. 60,	℥ij troy,
	" Fœniculi, No. 60,	℥j "
	Sacchar. alb., sifted,	℥ix "
	Glycerinæ,	f℥iv "
	Alcohol. dil.,	sufficient quantity.

Mix the powders, and, having moistened the mixture with dil. alcohol, pack it firmly in a glass funnel prepared for percolation, and gradually pour diluted alcohol upon it until sixteen fluidounces are obtained, or until the mixture is exhausted. Set aside in a shallow dish, in a warm place, the first four fluidounces which pass, to evapo-

rate spontaneously to two fluidounces. To the remainder of the percolate add the sugar, and evaporate it in a water-bath, at a temperature not exceeding 160°, with frequent stirring, until the whole measures, when cold, ten fluidounces. To this add the glycerin and reserved portion, mix well, and strain through muslin.

If the percolation is managed with care, the reserved percolate will contain at least four-fifths of the active properties of the senna and the aromatic qualities of the fennel. This, then, being evaporated spontaneously, and the remaining portion protected by the sugar from the injurious effects of the atmosphere during the concentration, furnishes a syrup embodying the virtues of the senna and fennel unimpaired.

One serious objection to the process of the U. S. P., 1850, was the prolonged exposure to heat necessary to reduce the syrup to the "proper consistence," during which a great portion of the volatile oil of the fennel must have been dissipated, and the purgative properties of the senna in a measure diminished, while at the same time its griping tendency was promoted.

This same objection applies with double force to the present British process, presented in the last edition of the U. S. D. In that process about one hundred fluidounces of infusion are directed to be reduced, by evaporation, to ten fluidounces. It can well be imagined what influence this torture, as it were, would exert upon the medicinal properties of the senna, if they are at all vulnerable to the effects either of heat or atmospheric oxygen.

Another very objectionable feature of the British syrup is that of its strength, which is about four times as great as that of the U. S. P., 1850. Upon this point, Dr. Wood, in his comments upon the process in the U. S. Dispensatory, very properly makes the following remarks: "The present British syrup, which has superseded the former syrups of the London and Edinburgh colleges, differs from them, as well as from that of the U. S. Pharmacopœia of 1850, very greatly in strength, so that in prescribing it physicians accustomed to the doses of the former syrups must be on their guard not very seriously to overdose their patients." These remarks are equally applica ble t its use in domestic practice; and, since it is chiefly given to children, its administration in excessive doses might be attended by mischievous results

As the British process is the only one that the late edition of the U. S. Dispensatory offers to American pharmacists for their guide in the preparation of this syrup, and as it has an established reputation, they are obliged to keep it in stock, I think it highly important that it should be reinstated in the next edition of our Pharmacopœia, and a good working formula given, which will yield a reliable and at the same time a *permanent* preparation, corresponding in strength with that of the U. S. P., 1850.

The proportions of senna and fennel, in the formula given above, correspond precisely with those of the formula of our late Pharmacopœia; but in the latter process the volatile oil of the fennel was only partially extracted by the aqueous menstruum, and a portion even of that must have afterwards been lost in the evaporation of the syrup. This, therefore, necessitated the employment of a large excess of the fennel.

Now, since in the process proposed by me the aromatic properties of the latter are entirely extracted, and there is but slight if any loss by subsequent evaporation, I think that the quantity of the fennel might with propriety be reduced one-half, and still be sufficient to answer all purposes for which the aromatic is employed, without in the least impairing the virtues of the syrup.

It will be observed that in the above formula I have employed diluted alcohol as the menstruum in the place of water, which has heretofore been exclusively used. This has not been done unadvisedly, but from a strong conviction that the alcoholic menstruum possesses superior advantages over that of the aqueous one; for, by means of it there is obtained directly, by the process of percolation, a more highly concentrated solution, obviating the long and tedious application of heat necessary to reduce the aqueous solution to a proper strength, thus more than counterbalancing whatever advantages, if any, therapeutically, the aqueous may have been supposed to possess over the spirituous solvent.

It has doubtless been owing to the tedious and inefficient methods heretofore in vogue in the manufacture of this syrup, that has led to the discarding of its formula from our Pharmacopœia, and to its partial disuse in professional practice. It is certainly, however, when properly prepared, an efficient, useful and convenient preparation for children, for whom it was originally intended; and, if a reliable and satisfactory formula, such as we present, should be adopted in its

manufacture, its restoration to its former place in professional favor would doubtless follow.

Philadelphia, September, 1871.

ON THE PREPARATION OF SUPPOSITORIES.

By Robert F. Fairthorne.

Having noticed in the journals recently quite a number of articles on the above mentioned subject, and finding that the experience of the writers differs from mine in some respects, I thought that I would add to the general fund by giving the method which is employed in Mr. Shinn's store for preparing suppositories. The following plan has proved satisfactory in every respect:

The moulds (made of white metal and of the usual form) are suspended in ice water by means of a perforated tray, which is supported on the surface of the water. These are placed in the water a minute or two before using, so as to become thoroughly chilled, thereby preventing the suppositories from sticking.

The requisite quantity of butter of cacao having been weighed, is cut into thin slices by means of a knife. If an extract or other substance, soluble in water, is employed as the medicating ingredient, it is rubbed up with a small quantity of that liquid and reduced to the consistence of syrup. When this is accomplished, mix it with all the butter of cacao by trituration. Transfer the mixture to a capsule and heat it over a spirit lamp, constantly stirring with a spatula. When it is scarcely melted and about as thick as cream, pour into the moulds. So much heat should not be applied as thoroughly to melt the butter, but only just sufficient to render it thin enough to pour.

The suppositories must be allowed to remain at least fifteen minutes in the moulds surrounded by ice water, after which they may easily be removed by tapping the mould on the counter. They will be found when thus made to be hard and smooth. They keep well for several months, and if placed in a moderately cool place, such as a cellar, will remain unchanged even in the hottest weather.

The several points deserving special attention are, that butter of cacao alone will produce suppositories sufficiently hard for the purposes to which they are applied (except when camphor or other essential oil is introduced as the medicating ingredient, in which case the addition of a little wax or spermaceti is necessary), that the ex-

tract or other substance used is, by this process, first uniformly disseminated through the butter of cacao whilst cold, that substance being reduced to powder by trituration; that the cacao butter, &c., are kept constantly stirred when being heated, and that the mixture is only reduced to the consistence of cream by carefully regulating the amount of heat applied, so as to avoid the danger of deposition of extract, which always occurs when it becomes too thin from the use of too much heat.

TINCTURA OPII (U.S.P.)

By H. Treverton Bond, M. D.

The following is a quick method of preparing tinctura opii, thoroughly exhausting the opium; the resulting product is of officinal strength.

℞. Powdered opium; two and one-half troyounces.

Triturate in a mortar with one pint of boiling water gradually added, then add one pint of alcohol, shake thoroughly and filter; the opium left on the filter will be properly packed for percolation with the filtered liquid, which is the next step, adding sufficient water to the dregs to displace any remaining portion, until two pints of tincture are obtained.

Philada., Oct. 17th, 1871.

WATER—MUDDY, CLEAR, DISTILLED.

By H. M. Wilder.

Editor of the American Journal of Pharmacy:

Dear Sir,—I think that the following will be of use to some of your readers, particularly to those who have to depend on more or less muddy streams for their water supply, and who are not provided with a filtering apparatus, which, of course, is less expensive and obnoxious.

To clear muddy water I boil it with magnes. carbon. (1 tablespoonful to one or two gallons, according to its turbidity), and filter *hot*, magn. carbon. being much less soluble in boiling water (1:9000) than in cold (1:2500).

The only objection to the above is, a little dissolved carbon. of magnes. is not valid so long as the U. S. P. permits medicated waters to be prepared by means of it. As several salts and alkaloids are precipi-

tated by it, it has been proposed to neutralize the water with a few drops of a diluted acid.

To eye-waters only distilled water ought to be taken, which it is not difficult to obtain in towns containing chemical manufactories.

An excellent substitute for distilled water has been recommended by the late Prof. F. F. Mayer, of New York, in Am. J. Pharm., xxxii, 172: Put a *clear* piece of ice in a filter, and let it melt.

Philadelphia, Sept. 24th, 1871.

THE ACTIVE PRINCIPLE OF POLYGONUM HYDROPIPER.

By C. J. Rademaker, M.D.

Having seen hydropiper frequently used, both in the form of tincture and fluid extract in amenorrhœa and other uterine disorders, with very satisfactory results, I was induced to make a chemical examination of this drug.

In order to obtain the active principle or principles the following processes were resorted to:

Experiment 1*st.*—Two pounds of the herb were exhausted with diluted alcohol, the alcohol distilled off by means of a water-bath, the remaining liquid was evaporated to about one-third of the original bulk; during the evaporation a considerable amount of resinous matter was precipitated, the solution was filtered from the resinous precipitate and the filtrate treated with basic acetate of lead, which produced a yellow precipitate.

The precipitate produced was collected on a filter and washed with distilled water. The precipitated magma was then suspended in distilled water and treated with sulphuretted hydrogen; the resulting mixture of sulphide of lead and organic principle was treated with ether, the ether separated from the sulphide of lead and allowed to evaporate spontaneously.

The crystals thus formed were soluble in alcohol, ether, chloroform, and slightly soluble in diluted alcohol, but almost insoluble in water; when rubbed with water they become very sticky; the solution of the crystals had an acid re-action with litmus. Under the microscope they made a beautiful appearance, resembling the crystals of uric acid of human urine.

This acid may be called polygonic acid.

Experiment 2*d.*—The filtrate from which the acid had been re-

moved by means of basic acetate of lead, was treated with sulphuric acid, in order to remove the excess of lead, and then rendered alkaline by means of caustic potash and treated with ether.

The ether was separated and allowed to evaporate spontaneously. The mass thus left was perfectly white, neutral to test-paper, and had a bitter taste, was soluble in alcohol, ether, and the mineral acids; its solution in acids was not precipitated by ammonia, caustic potash, or sodic carbonate, nor was I able to obtain any crystals. From this I concluded that it possessed no basic properties.

Experiment 3*d*.—One pound of fluid extract (480 grs. to the fluid-ounce) was treated with hydrochloric acid, about five drops of the acid to each fluid-ounce of the liquids, and then treated with ether. The ether separated and treated with basic acetate of lead, the precipitate produced was collected on a filter and washed with distilled water, the precipitated magma was suspended in distilled water and treated with sulphuretted hydrogen.

The mixture of sulphide of lead and organic principle was again treated with ether, the ether separated from the sulphide of lead, evaporated and the acid crystallized.

The crystals produced resembled those as prepared in experiment No. 1.

Chemical properties of Polygonic Acid. Polygonic acid, as prepared in experiments 1 and 3, has a green color, acrid, and bitter taste. It has strong acid properties, completely neutralizing bases, and uniting with them to form salts.

Aqua ammoniæ, caustic potash and sodic carbonate, added to the crystals or a solution of the crystals, produced an intense yellow color, and the crystals were dissolved. Nitric and hydrochloric acids added to crystals or solution of the acid produced a yellow color. Sulphuric acid added to the crystals or a solution of polygonic acid, produced a dark red color, which gradually became black. Basic acetate of lead added to a solution of the acid or its salts, produced a yellow precipitate, soluble in the mineral acids. Nitrate of suboxide of mercury produced a yellowish white precipitate, soluble in the mineral acids. Mercuric chloride produced a green precipitate, soluble in the mineral acids. Cyanide of potassium produced a yellow color. Ferric chloride produced a slight dark color. Cupric sulphate produced a slight green color. Baric chloride, chloride of gold, nitrate of silver and chloride of platinum produced no change.

From the above it will be seen that polygonum hydropiper contains an acid, crystallizable, coloring principle upon which the medicinal virtues of the drug mainly depend.

NOTES ON CARBOLIC ACID.

By William C. Bakes.

Few substances have acquired greater popularity, and given such general satisfaction as carbolic acid. For a long time it was exclusively used by the medical profession, but the public having heard of its antiseptic and disinfectant properties have adopted it in various forms as one of their household requisites.

Its use as a remedial agent dates from 1859, when M. Le Beuf, of Bayonne, France, employed the then crude carbolic acid in the form of a saponaceous emulsion. He assisted in the work of M. Lemaire, of Paris, who has made it the foundation of a laborious research. The two investigators sent to the Academy of Medicine a paper on the value of the emulsion as an application to gangrenous ulcers. M. Lemaire continued his investigation, and published an elaborate treatise in 1863, in which he narrated a series of experiments in which carbolic acid was employed as a means for the destruction of low forms of animal and vegetable life, as a preventative of fermentation and putrefaction, as an external application in cases of ulcerating and suppurating surfaces, as well as an internal remedy in zymotic and other diseases. While carbolic acid was attracting attention as a disinfecting agent, experiments were being made as to its use in the arts. Laurent, in 1841, after a series of investigations, produced picric acid by the action of nitric acid upon carbolic acid. Picric acid is used as a yellow dye, and from it are derived picramic acid and isopurpurate of ammonium, yielding rich brown and garnet hues.

In 1865 Professor Lister began the use of carbolic acid in surgical cases attended with suppuration, and gave the result of his investigations in several communications to the "Lancet," in the March and July numbers of 1867.

To the pharmaceutist the preparations of carbolic acid are of some interest, and demands are often made for the various combinations without any definite formula.

A valuable work of 356 pages has recently been published, enti-

tled "The Antiseptic System—a Treatise on Carbolic Acid and its Compounds, etc.," by A. E. Sansom, M. D., of London, which contains much useful information, relating not only to the chemistry of carbolic acid, but to its general employment in medicine. In the appendix a series of formulæ are given as follows:

1. *Liquefied Carbolic Acid.*—*A.* Calvert's purest (No. 1) acid, liquefied by placing the bottle containing it in hot water, 9 parts; water, 1 part. Mix well.—*Calvert.*

B. Pure carbolic acid, 15 parts; alcohol, 1 part. Mix well. This keeps fluid at all ordinary temperatures.—*Author.*

For many purposes, especially for dispensing, it is convenient to keep the acid in a liquid form; otherwise the crystals must be melted by heat each time that the acid is employed.

2. *Solution of Carbolic Acid in Water.*—To obtain uniform solution, it is better to slake the carbolic acid with four times its bulk of hot water, and then to add a sufficiency of cold water; or, the carbolic acid may be first mingled with alcohol, which causes more ready solubility, before the addition of cold water. Water will not dissolve more than one-twentieth of its bulk of carbolic acid.

3. *Alcoholized Carbolic Acid* (Acide Phénique Alcoolisé).—Alcohol (90°), crystallized carbolic acid, equal parts. Mix, and keep in a well-stoppered bottle. Used for making carbolized solutions, &c. Being more fluid than carbolic acid, it more readily penetrates the tissues. Useful in poisoned wounds, for application to small-pox pustules, &c.—*Lemaire.*

4. *Etherized Carbolic Acid* (Ether Phenique).—Sulphuric ether, 100 parts; carbolic acid, 1 part. Used for insufflation in catarrh of Eustachian tube.—*Lemaire.*

5. *Carbolized Vinegar* (Vinaigre Phenique).—Ordinary vinegar, 4 parts; carbolic acid, 1 part. Mix. For use, instead of aromatic vinegar, as a disinfectant, &c.—*Quesneville.*

6. *Glycerinum Acidi Carbolici.*—Carbolic acid, 1 ounce; glycerin, 4 fluidounces. Rub them together in a mortar until the acid is dissolved.—*British Pharmacopœia.*

7. *Carbolized Glycerin* (Glycerin Phéniquée).—Pure glycerin, 100 parts; carbolic acid, 1 part. Mix. For impetigo, chronic eczema, lichen, prurigo and pemphigus.—*Lemaire.*

8. *Syrup of Carbolic Acid* (Sirop d'Acide Phénique).—Simple syrup, 100 parts; carbolic acid, crystallized, 1 part. Mix.—*Chaumelle.*

9. *Carbolic Acid Liniment.*—For counter irritation.

A. Alcohol, 50 parts; carbolic acid, 1 part. Mix.—*Lemaire.*

B. Olive oil, 7 parts; carbolic acid, 1 part. Mix.—*Author.*

10. *Compound Disinfectant Solution.*—Water, 1000 parts; carbolic acid, 10 parts; sulphate of zinc, or sulphate of iron, 3 parts. Mix. Carbolic acid has no chemical action on sulphuretted hydrogen, or carbonate of ammonium. When it is employed alone as a disinfectant, deodorization does not take place till the gases have disappeared by diffusion. The sulphates change the sulphuretted hydrogen into sulphides, and the carbonate of ammonium into metallic carbonate and ammonium sulphate—all inodorous compounds.—*Lemaire.*

11. *The Süvern Deodorant.*—Good quick lime, 1½ bushels, put in a cask, slaked, and well stirred; coal tar, 10 lbs. Mix thoroughly; then add magnesium chloride, 15 lbs., dissolved in hot water. Mix again, and add hot water until the mass is liquid enough to drop slowly from a stick plunged into it and then withdrawn. The magnesium chloride forms deliquescent calcium chloride. Magnesia being liberated, this prevents caking and adherence to pipes, which is a defect when lime alone is used.—*Parkes.*

12. *Carbolized Earth* (Terre Coaltarée).—Common loam, passed through a sieve, 100 parts; coal tar, 2 parts. Mix intimately. Disinfectant for crops, and for destruction of noxious insects.—*Lemaire.*

13. *Solution of Carbolic Acid for the Toilette.*—Crystallized carbolic acid, 10 parts; essence of millefleur, 1 part; tincture of quillaya saponaria, 50 parts; water, 1000 parts. Mix. The saponine replaces soap with advantage. The above should be employed, diluted with ten times its bulk of water, for disinfecting the skin, for washing the hands after any risk of contagion or inoculation, &c.—*Lemaire.*

14. *Tincture of Saponine,* as used in the foregoing preparation, is

thus made: Bark of "Quillaya saponaria," 1 part; alcohol (90°), 4 parts. Heat to ebullition, and filter.—*Le Beuf.*

15. *Carbolized Water for the Teeth.*—Water, 1000 parts; essence of meat, 2 parts; tincture of saponine, 50 parts; pure carbolic acid, 10 parts. Mix. A dessertspoonful in a quarter of a tumblerful of water, serves as an excellent preparation for cleansing and preserving the teeth.

16. *Carbolized Ointment.*—Purified lard, 100 parts; carbolic acid, 1 part. Mix. Considered of some service in skin affections; but, modified as it is by the fat, it cannot replace the aqueous solution of carbolic acid.—*Lemaire.*

17. *Carbolized Amylaceous Ointment.*—Pure starch, 3 parts; hot water, 20 parts. Mix, in the ordinary way (the starch being made first into a paste with cold water, and then hot water added), to a stiff consistence; then add olive oil 1 part, glycerin 3 parts, carbolic acid 1 part, and thoroughly mix in a mortar. When cool this is a soft jelly, which can easily be applied as ordinary ointment. It is much more efficacious than one the basis of which is entirely fat, and it is an agreeably cool application.—*Author.*

18. *Carbolized Oil.*—*A.* Crystallized carbolic acid, 1 part; boiled linseed oil, 4 parts. Dissolve.—*Lister.*

B. Pure carbolic acid, 1 part; olive oil, 6 parts. Olive oil is better than linseed oil as a vehicle, as the latter is more prone to oxidation.—*Calvert.*

19. *Carbolized Putty.*—Carbolized oil, about 6 tablespoonfuls; common whiting (chalk), sufficient to make a firm paste.—*Lister.*

20. *Antiseptic Lead Plaster.*—Olive oil, 12 parts (by measure); litharge (finely ground), 12 parts (by weight); beeswax, 3 parts (by weight); crystallized carbolic acid, 2½ parts (by weight). Heat half the olive oil over a slow fire; then add the litharge gradually, stirring continually until the mass becomes thick, or a little stiff; then add the other half of the oil, stirring, as before, till it becomes thick again. Then add the wax gradually till the liquid again thickens. Remove from the fire and add the acid, stirring briskly till thoroughly mixed. Cover up close, and set aside to allow all the residual

litharge to settle; then pour off the fluid, and spread upon calico to the proper thickness. The plaster made in this way can be spread by machine and kept rolled in stock, and if in a well-fitting tin canister, will retain its virtues for any length of time.—*Lister.*

21. *Antiseptic Lac Plaster.*—Shellac, 3 parts; crystallized carbolic acid, 1 part. Heat the lac with about one-third of the carbolic acid over a slow fire till the lac is completely melted; then remove from the fire and add the remainder of the acid, and stir briskly till the ingredients are thoroughly mixed. Strain through muslin, and pour into the machine for spreading plaster, and when the liquid has thickened by cooling to a degree ascertained by experience, spread to the thickness of about one-fiftieth of an inch.

Afterwards, brush over the surface of the plaster lightly with a solution of gutta percha in about 30 parts of bisulphide of carbon. When the sulphide has all evaporated, the plaster may be piled in suitable lengths in a tin box, without adhering, or rolled up and kept in a canister.—*Lister.*

22. *Antiseptic Cere-Cloth.*—Cloth or thin calico is saturated with cerate (made after the following formula), by simply drawing a portion through it while in a fluid state, or in pieces of any length and width, by rolling, by means of a machine, the calico over cylinders containing cold water, as fast as it has taken up the cerate.

A. Strongest Cerate.—Calvert's pure carbolic acid, liquefied, 3 fluidounces; olive oil (colored red with alkannet root to distinguish the cerate), 1½ fluidounces; yellow wax, liquefied, 1½ fluidounces; paraffin, liquefied, 6 fluidounces. Mix.

B. Medium Strength.—Pure carbolic acid, 2 fluidounces; olive oil, 2½ fluidounces; yellow wax, 2½ fluidounces; paraffin, 5 fluidounces. —Mix.

C. Weakest.—Pure carbolic acid, 1½ fluidounce; olive oil, 1 fluidounce and 6 drachms; white wax, 1 fluidounce and 6 drachms; paraffin, 7 fluidounces. Mix.

23. *Antiseptic Muslin Gauze.*—Paraffin, 16 parts; resin, 4 parts; crystallized carbolic acid, 1 part. Melt together. Cheap muslin gauze is dipped in the melted mass and well wrung or pressed while hot. A good substitute for oakum as an antiseptic covering for

wounds, unirritating to the most sensitive skin, highly retentive of the acid, and almost destitute of odor. It should, when used, be folded in about 8 layers. It loses the paraffin and resin when washed in boiling water, so the same gauze may be used repeatedly.—*Lister.*

24. *Protective against Local Irritating Effects of Carbolic Acid in Antiseptic Dressings.*—Varnish oiled silk on both surfaces with copal varnish. When dry, brush over with a mixture of starch and dextrin, to give it a film of material soluble in water, so that it becomes uniformly moistened when dipped into antiseptic lotion. When not at hand, common oiled silk may be used as a substitute for it, if smeared with an oily solution of carbolic acid, and used in two layers, to make up for its inferior efficiency.—*Lister.*

25. *Antiseptic Adhesive Plaster.*—Dip ordinary strapping in hot solution of carbolic acid, made by mixing 1 part of 1 to 20 lotion with 2 parts of boiling water. Will adhere to a moist skin, so that it may be employed under spray when advisable.—*Lister.*

26. *Carbolized Powders.*—Pure liquefied carbolic acid, 5 parts; alcohol, 5 parts. Mix. Add by degrees 100 parts of one of the following powders: lycopodium, starch, charcoal, plaster-of-Paris. The proportions of carbolic acid can be increased or decreased as desired.—*Author.*

27. *Antiseptic Catgut Ligature.*—Catgut of the thickness required is to be kept steeped in carbolized olive oil (1 pint in 5), with a very small quantity of water diffused throughout it.—*Lister.*

28. *Aceto-Carbolic Solution for Tinea and Scabies.*—Acetic acid (pyroligneous), 8°, 20 parts; pure carbolic acid, 5 parts; water, 75 parts. Mix the two acids and add the water. The acetic acid favors penetration through the epidermis. For tinea, apply the liquid, once a day, over the diseased parts, by means of a brush. For scabies, sponge all the parts. The clothes, &c., of the affected individual should also be treated with the liquid.—*Lemaire.*

29. *Carbolized Gargle for Diphtheria, Tonsillitis, &c.*—Carbolic acid, 20 minims; acetic acid, ½ drachm; honey, 2 fluidounces; tincture of myrrh, 2 fluid-drachms; water, 6 fluidounces. The carbolic and acetic acids to be well shaken together before the other ingredients are added.—*Charles Sedgwick, Jr.*

30. *Carbolized Mixture for Zymotic Diseases.*—Carbolic acid,

acetic acid, of each 1 drachm to 1½ fluid-drachm; tincture of opium, 1 fluid-drachm; chloric ether, 1 fluid-drachm; water, 8 fluidounces. A tablespoonful every four hours until the fever has subsided.—*Dr. Alex. Keith.*

31. *Mixture of Quinine and Sulpho-Carbolate of Sodium.*—Quinine sulphate, 1 grain; sulphuric acid, 5 minims. Dissolve, and add to the solution of sodium, sulpho-carbolate, 20 grains; in water, 1 fluidounce.—*Author.*

ON AN APPARATUS FOR MAKING SYRUP BY THE COLD PROCESS.

By Geo. Macdonald.

The question as to the real utility of what is known as the "cold process" for making simple syrup, having been considerably agitated in the pharmaceutical journals of the country during the past year, I wish to add my testimony in its favor.

I have, during the past ten years, made considerable quantities of simple syrup by this method, and with uniformly good results. When the operation is properly conducted, the resulting syrup is beautifully bright, of good density, and keeps well (much better than syrups made with heat) even during the hottest summer months. It also recommends itself by its convenience, as by its use the application of heat, and the operations of clarifying and straining are completely dispensed with, with the satisfaction of obtaining, with all this saving of trouble, a really better product.

The apparatus I have been in the habit of using is quite cheap, and simple in construction, and as I do not think it can easily be excelled for *real* convenience and utility, a description of it may be of interest to some readers of the journal. Before describing it, however, I will say that I obtained the idea for the percolator from an article published in the "Druggists' Circular," ten or twelve years ago. For the receiver, which embodies an application of a well-known natural principle, I claim for myself no particular merit.

The first and most essential part is, of course, the percolator. To make this, take an ordinary iron-bound ten gallon keg, the head of which consists (preferably) of one piece. Take out the head by loosening the hoops, and bore in it with a quarter-inch augur bit, as many holes as you possibly can without weakening it too much—one inch apart is about the proper distance. You now drop the perfor-

ated head into the bottom of the keg, taking care that it shall be as nearly as possible equi-distant from the true bottom, and asit will not fit perfectly on account of the inequality of the staves, pack around the edges, where necessary, with raw cotton. You then again tighten the upper hoops. Between the true and false bottom there is left a space of about an inch. Bore into this space a hole of suitable size and insert a small faucet, one of the old fashioned, metallic, screw-top kind I have found answers best. With the exception of the flannel strainer, which is placed over the perforated bottom, and which I will afterwards describe, the percolator is now ready.

You now take another ordinary keg of about twenty-five (25) gallons capacity, and insert as near the bottom as possible, a faucet of the kind usually known as a "molasses-gate," and about three or four inches above the middle (or where the bung is usually bored) another faucet of the same description. The object of this will be seen further on. In the head of the keg, near the edge and on the same side, and in a line with the faucets, bore a one-inch hole for the insertion of a funnel. This constitutes the receiver.

To arrange the apparatus for use, obtain a box the width of which will be about six inches greater than the greatest diameter of the large keg, and the length about four or six inches more than the height of the keg. One of the largest sized boxes in which drugs are packed (about three feet in length, two feet in width, and one foot and a half in depth) will be about right. Remove the cover and set it securely on end on another box of proper strength, and about a foot high. In it place the receiver, allowing its edge to project about a couple of inches beyond the front of the box. On the top of this box place the percolator in such a manner that the faucet will be, as nearly as possible, over the centre of the funnel in the receiver. Four thicknesses of fine flannel must now be laid over the perforated bottom of the percolator, and the apparatus is ready for use.

I will here state that the apparatus of the dimensions herein described, is intended for making one hundred and sixty (160) pounds of white sugar into syrup. For making smaller quantities a smaller receiver should be used.

In making simple syrup by this process the proportions used are fourteen (14) pounds avoirdupois of white sugar to one gallon of water, which, as there is little loss by evaporation, furnishes a result which approximates very closely with that of the pharmacopœia.

In making syrup, the operator may either weigh and measure out the requisite quantities of sugar and water beforehand, or he may keep account of the relative quantities used during the progress of the operation. The method of procedure is this: Put into the percolator as much sugar as it will hold, being careful not to disarrange the flannel strainer, and add water till it is full. Let stand about half an hour, or until the sugar has absorbed as much of the water as it will, and then open the faucet so that the syrup may pass through either in a *very* thin stream, or in a rapid succession of drops, and leave it so until there is no more water in the percolator. Then close the faucet, refill with sugar and water, and proceed as before and continue until all the water necessary for the sugar has been added. If the operation has been properly conducted (and a little experience will ensure this) it will be found that after the last portion of water has been added and passed into the receiver, that the percolator is half, or perhaps two-thirds full of undissolved sugar. And here will be seen the purpose for which the upper faucet in the receiver was designed. The syrup that passes into the receiver is not of uniform density, and the lighter portions, as a matter of course, will be found at the top. The upper layers are usually quite thin. These are drawn off by the upper faucet and poured upon the undissolved sugar, a gallon at a time until all has passed into the receiver. The receiver is then taken down, laid upon its side on the floor and well shaken until all the parts are thoroughly mixed, when it is again to be placed in position to be drawn from as required.

This method is especially to be recommended to dealers who sell large quantities of soda water, and it requires neither great skill nor close attention, does away with the necessity for the use of fire during the hot summer months, and furnishes a product which is in every respect unexceptionable.

Cairo, Ill., Oct. 12th, 1871.

CUNDURANGO.

Editor American Journal of Pharmacy:

Dear Sir:—We had a few days since a call from Mr. Wiehl U. S. Consul at Guayaquil, with samples of the flowers, leaves and fruit of the cundurango vine.

The name cundurango means literally eagle vine. Of this plant, it appears there are some six known varieties, but three of which have

been much used medicinally, called in Spanish, dog killer, big fruit and little fruit. The dog killer is the only true officinal cundurango, and is easily distinguished from all the other varieties, by the fact that when cut transversely, the bark of the vine is full of small red crystals, which are resinous and shining in cells. All these plants belong to the Asclepiadeæ family. The flower, the leaf and the pod, with the seed and silk fibres of the true "mata perro" or dog killer, look almost precisely like those of our own milkweed.

The cundurango is a tropical climbing milkweed, seeking the loftiest trees in the cinchona region, and the testimonials about it are very high as an alterative for syphilitic affections, &c.

In haste, your friend,

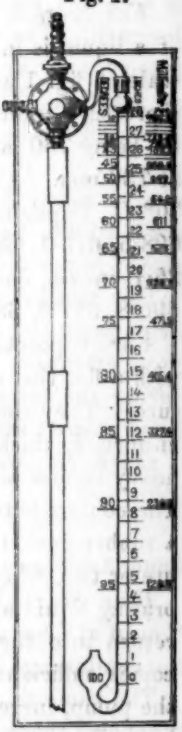
DAN. C. ROBBINS.

ON THE WATER AIR-PUMP AND ITS USES.

By F. A. WOLFF & SONS, of Heilbronn.*

The water air-pump, as constructed by the authors, consists mainly of metal. It differs also from the one described on page 402 of this volume, in the admittance of the water from the top, and in making the connection with the vessel to be exhausted at the side. The laboratories being mostly on the ground floor, and a well of sufficient depth frequently not at command, the pump itself may be placed in an upper story, while the vacuo-meter, the cock for the water supply, and a piece of glass tube, inserted in the leaden discharge-pipe, may be placed in the laboratory, the only inconvenience resulting from such an arrangement being the increased length of two or three pipes. The action of this air-pump is at first slow, until the falling water has displaced the air entirely from the discharge-pipe, when it rapidly increases.

Fig. 1.



The cut represents the air-pump in one-tenth of its natural size. With the barometer at 750 mm. and a bore of the discharge-pipe of 8 mm., a rarification of the air was obtained corresponding to the

* Reprint from N. Jahrbuch für Pharmacie, communicated by the authors, and condensed by the editor.

following number of millimeters, if the perpendicular length of the discharge-pipe was—

3	meters	to	130	millimeters.	9	meters	to	526	millimeters.
4	"	"	200	"	10	"	"	580	"
5	"	"	280	"	11	"	"	642	"
6	"	"	320	"	12	"	"	705	"
7	"	"	400	"	13	"	"	715	"
8	"	"	471	"	14	"	"	728	"

With the above diameter and greatest length of the discharge-pipe a vacuum corresponding to 573 mm. may be produced by 10 litres water in a vessel of the same capacity within 10 minutes.

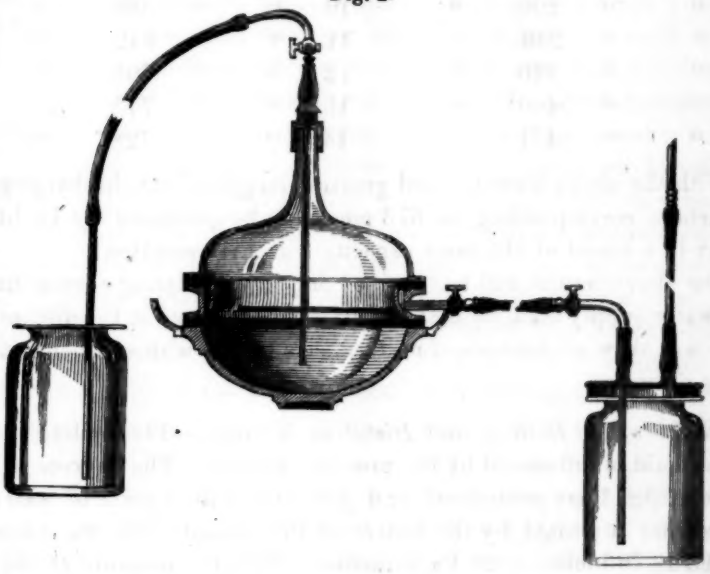
The above results will be obtained only by regulating several times the water supply cock, so that the glass tube inserted in the discharge-pipe will show air-bubbles of uniform size mixed with sufficient quantities of water.

Evaporation, Boiling and Distilling in vacuo.—The boiling point of a liquid is influenced by the pressure upon it. The degrees in the scale of fig. 1 are centesimal, and give the boiling point of water at a pressure indicated by the figures on the opposite side, the barometer being 760 mm., = 28 Paris inches. With the pressure of the air at 730 mm., = 27 inches, water will boil at 10, 15, 20, 30, 40, 60 and 80° C., requiring the column of mercury to be 720·8, 717·3, 712·6, 698·5, 675·1, 581·2 and 375·4 mm. The barometer at 700 mm., = 25·1 inches, demands for the same purpose a mercury column of 690·8, 687·3, 682·6, 668·5, 645·1, 551·2 and 345·4 mm.

For evaporation *in vacuo,* the authors use a hemispherical vessel, with a flat rim, and of sufficient strength to withstand the great pressure. They use as a cover or head a glass vessel of similar shape, uniform in thickness, and at the arch lengthened out, so that, by a heavy rubber pipe, it may be connected directly with the water-pump. The contact between the upper and lower hemispheres is perfected by a rubber gasket, and by pressing the hand upon the cover for a minute or two, when the pump begins to work. The vapors of the evaporating liquid at first condense upon the inside of the glass head, and return into the evaporating basin; but the connecting-pipe soon becomes sufficiently warm to pass the vapors without condensation into the pump, increasing thereby its effects. The boiling liquid may now be easily examined through the glass cover.

A greater distance between the water air-pump and evaporating basin necessarily increases the condensation of the aqueous vapor in

Fig. 2.



the connecting-pipe. To prevent their returning into the evaporating basin, a metallic recipient, forming a ring about 6 cm. high, is inserted between the basin and head. This ring has on its inside a gutter, connecting on one side with a pipe of any desired length. (See fig. 2.) The pipe has two stop-cocks, the inside one being kept open while the outer is closed. To discharge the accumulated water, the inner cock is closed, and the water run off by emptying the outer one, which is then again closed and the inner one *gradually* opened, to prevent the water accumulated in the gutter from being forced back into the basin by the air now contained in the pipe. It will be observed that evaporation may thus be uninterruptedly continued without interfering with the vacuum.

The more the pressure is reduced inside the apparatus, the more violent will be the concussions produced by the vapors escaping from the liquid, increasing the liability of the latter to boil over. Great care must therefore be exercised in the application of heat, or the violence of the concussions at once lessened by admitting a little air

through the cocks connected with the recipient, thereby decreasing the partial vacuum.

The vapors of the evaporating liquid may be condensed by connecting the basin with the pump, instead of from the dome of the cover, from the pipe of the recipient, and inserting a suitable flat-lipped vessel, as arranged in fig. 2, the stop-cocks in the pipe being then unnecessary. The air is now exhausted through this cooler, which is immersed in cold water and receives the condensed liquid.

Should the liquid to be evaporated be of a larger volume than the capacity of the basin, the latter is filled from time to time through a pipe connected with the cover, by opening the stop-cock, when the atmospheric pressure will force the liquid from the supply vessel into the basin without disturbing the operation. Large quantities may thus be evaporated from relatively small basins without destroying the vacuum.

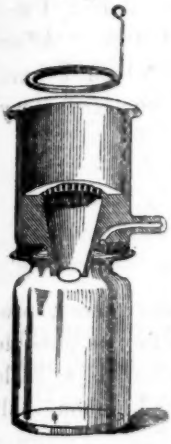
The authors regard flat evaporating basins, not materially departing from the spherical or elliptic shape, as the most suitable forms, and caution against the employment of flat-bottomed vessels. The strength of these vessels must be sufficiently great to withstand the pressure. A perfectly exhausted vessel, the barometer being 760 mm., = 28 Paris inches, sustains a pressure of 2·066 lbs. upon each square centimeter surface. A basin of 5 litres capacity has a surface of 960, the recipient 910, and the glass head of 980, the whole apparatus 2850 cm. surface, which would have to sustain a pressure of 5880 lbs. Since, however, evaporation is in this apparatus really performed at a pressure of 730 mm., = 27 inches, the weight to be sustained is reduced to 5670 lbs. The authors have used tinned copper and block tin basins with success, also glass basins of 3 litres capacity, and they are experimenting with porcelain.*

Filtration in Vacuo.—It is exceedingly difficult to regulate the working of the water air-pump so as not to produce too excessive a pressure for the filter to sustain. A stop-cock, that may be introduced between the vessel and the pump, would but partly fulfill the desired object, because it does not allow to obtain any desired degree of partial vacuum. The authors constructed a simple regulator, consisting of a metallic pipe, inserted at the place mentioned, to which a curved handle is soldered, supplied with a screw ending into a fine

* Porcelain-lined iron basins might answer for many purposes.—J. M. M.

steel point, which fits into a small hole drilled into the side of the pipe. By loosening the screw more or less, any desirable quantity of air can be here constantly admitted and a pressure obtained, remaining perfectly uniform during the operation.

Fig. 3.



To facilitate the filtration of larger quantities of liquids, a filtering vessel, (fig. 3) has been constructed of porcelain or metal, in which the disc rests upon a sieve, thus presenting a large surface to the action of the vacuum. The funnel end of this vessel prevents the filtered liquid from contact with the rubber gasket, and permits the use of receiving-bottles of different diameter in the neck.

Drying of Crystals and Herbs.—It is theoretically correct that water boils in a vacuum of 720 mm. at 39° C., and it might be supposed that damp crystals and fresh herbs could be rapidly dried therein. The water, however, does not adhere superficially to the plants, but is contained in their cells; they therefore part with it with difficulty, and are often taken out of the vacuum in an almost "scalded" condition. It is similar with crystals, which do not lose their interstitial water any quicker *in vacuo* than in the open air; and, if the evaporation is facilitated by the application of heat, the water of crystallization is likely to be likewise expelled.

For many, if not for all crystals and herbs, not the rarification, but a current of air, is requisite to obtain satisfactory results, and this may be readily produced by means of the water air-pump.

In conclusion, the authors give some good advice about the putting up and the use of this instrument. They particularly recommend to employ as few stop-cocks as possible, which soon begin to leak under greatly reduced pressure. When, after some experience, the apparatus has received its most advantageous position, some of the rubber tubing may be replaced by suitable metallic pipes.

THE COMPOUND IRON MIXTURE OF THE PHARMACOPŒIA.

By C. A. Staples.

This has always been a favorite medicine, and, when carefully prepared, is perhaps one of the safest and most efficacious of the tonic

chalybeate emmenagogues, and, consequently, it is the one most frequently prescribed, but it has always been exposed to the great objection that its extemporaneous preparation takes considerable time, and it cannot be kept ready for use as its character soon changes,—a few hours making a perceptible difference in its appearance, even if it does not in its medicinal efficacy. To remedy this defect, I endeavored to prepare it in a concentrated form in two bottles. After a few experiments, I adopted the following formula, which I have used for a number of years, and the result has been so satisfactory as to leave nothing to be desired:—

℞. Gum. Myrrh. ℥ij
Potas. Carb. ℥j
Sp. Myrist. ℥viij
Aq. Rosæ ad ℥xx.

The myrrh should be carefully selected—clean pale pieces, presenting an opaque fracture being the best. Beat it as fine as possible in a large mortar, then add the carbonate of potash with a little rose-water and grind it to a smooth paste, gradually add about half a pint of rose-water to make a fine emulsion, add the spirit of nutmeg and as much more rose-water as will make it twenty ounces; preserve it in a stoppered bottle, labelled "Concentrated Myrrh Emulsion pro Mist. Ferri Co. ʒj to ℥j."

For the other bottle, boil 2 fluid-ounces of distilled water in a glass flask; add ℥j of sulphate of iron, pure and free from oxide, dissolve and filter it into a 6-ounce bottle and fill it up with simple syrup; label it "Syrup of Sulphate of Iron gr. j in ♏ vj, or ♏ xv to each ounce of Mist. Ferri Co."

These preparations will be found very convenient; as for each ounce of the mixture you have merely to measure ʒj of the emulsion and ♏xv of the syrup, dilute each with a portion of rose-water, mix and fill the bottle with rose-water, and mist. ferri co. of excellent quality is made in a few seconds.

Both preparations keep well; the quantity of spirit in the emulsion preserves it from decomposition, and it rather improves by keeping; and the syrup will be found to keep free from oxide, which the crystals rarely are, however pure they may appear to be. It may also be used for dispensing sulphate of iron in other mixtures, where the sugar is not an objection; for this purpose I make the above solution of ℥j of sulphate into an 8-ounce bottle of syrup; this gives one part of

sulphate in eight measures of syrup, which I find more convenient for general dispensing, but it contains too much sugar for the mist. ferri co. as directed in the present edition of the Pharmacopœia.—*Pharm. Journ. and Trans., Sept.* 2, 1871.

ON THE BEHAVIOR OF SUPERSATURATED SALINE SOLUTIONS WHEN EXPOSED TO THE OPEN AIR.*

By Charles Tomlinson, F.R.S.

It is known that, when a vessel containing a supersaturated saline solution is opened in a room, it immediately crystallizes, provided the tempertaure be not too high. Mr. Tomlinson shows that supersaturated solutions of Glauber's salt (and also of Epsom salt, and of alum) may be exposed to the open air of the country for many hours, and even be taken out of the flasks in clean metal spoons, without crystallizing. From a large number of experiments, conducted under various conditions, the following conclusions are drawn:—

1. That a highly supersaturated solution of sodic sulphate may be exposed to the open air of the country in an uncovered flask, and in cloudy weather, for from twelve to twenty hours, without any formation of the ordinary ten-watered salt.

2. That if the temperature fall to 40°F., and under, the modified seven-atom salt is formed at the bottom of the solution, just as in covered vessels.

3. That if the exposed solution suddenly crystallizes into a compact mass of needles, a nucleus may always be found in the form of an insect, a speck of soot, a black point of carbon, &c.

4. That if, during the exposure, rain come on, the solution generally crystallises suddenly, in consequence of an active nucleus being brought down. But if the flask be put out *during* heavy rain, when we may suppose all the solid nuclei to have been brought down, the rain-drops, now quite clean, fall into the solution without any nuclear action.

5. That the young and newly-sprouted leaves of trees, such as the gooseberry and current bushes, have no nuclear action.

6. That, in clear cloudless weather, when the force of evaporation is strong, the solutions, by exposure, produce fine groups of crystals

* Read before the British Association, Edinburgh Meeting, Section B.

of the ten-atom salt, just as a saturated solution would do if left to evaporate slowly in an open dish.

7. That if the solution, after being exposed to the open air, be brought into a room, it crystallizes immediately under the action of ærial nuclei.—*Chemical News, August*, 1871.

SACCHARATED TAR, OR SOLUBLE VEGETABLE TAR.

By M. A. Roussin.

The value of vegetable tar as a therapeutic agent is generally recognized, but hitherto, in consequence of the small extent to which it is soluble in water, its use has been limited. Many attempts have been made to secure a greater solubility, but this has only been obtained by the employment of alkalies,—that is to say, by saponification. But saponification undoubtedly modifies the elements of the tar, and partly destroys its curative properties.

According to M. Adrian, "these preparations do not correspond by their chemical composition to the therapeutic properties that are expected in them," and he states that he has found alkalies, as well as acids, to modify the resinous qualities that are the basis of the medicament.

Dr. Jeannel has expressed a similar opinion. He says it is necessary that the tar should be emulsed by a neutral substance, since by so doing all the natural properties of the tar would be preserved.

Impressed with the correctness of this idea, M. Roussin sought to adapt to vegetable tar the same process by which he was able, on a former occasion, to form an emulsion with balm of copaiba.* At that time he proposed to use sugar for facilitating the emulsion of copaiba in water, and as a corrective of the repulsive taste of that substance. Sugar being a neutral substance, without any chemical action capable of modifying the composition or curative properties of medicinal substances; and daily associated without hesitation with all kinds of remedies.

After several attempts this problem was resolved, and a complete solution of the vegetable tar in water obtained. The emulsion of tar was effected by triturating in a porcelain mortar, so as to obtain a homogeneous paste, purified tar, powdered sugar and powder of gum

* "Annales du Comité Médical des Bouches-du-Rhône," t. v. p. 67.

arabic. A small quantity of water was added to obtain an emulsion; it was then left to stand, and afterwards decanted. This saccharated emulsion had not the repulsive odor of the emulsion prepared with alkali; it possessed the odor of tar, and a taste neither sharp nor bitter. It was miscible with water in all proportions, so that, by estimating the quantity of tar present, a solution might be prepared instantaneously, containing any required quantity of the active principle.

But the liquid form of the medicament presenting many and serious inconveniences, it appeared to M. Roussin that the pulverulent form, with all its practical advantages, would be very desirable. He therefore pursued his researches until he succeeded in obtaining a saccharate, as a yellow powder only differing from sugar in appearance by its color, and exhaling the balsamic odor of tar. This preparation constitutes a remedy essentially new in form, and appears to be the real and complete solution of the problem of Dr. Jeannel.

The saccharate of tar is constant in its composition. It contains 4 per cent. of purified vegetable tar. A teaspoonful (5 grammes) thus represents 20 centigrammes of tar, and will suffice for the preparation of a litre of water.

According to M. Bouchardat, 30 grammes of tar-water contain nearly 1 centigramme of the principles of the tar in solution. This would be nearly 30 centigrammes to the litre. Soubeiran says that the proportion of matter dissolved in tar-water is so small that 100 grammes do not contain 4 centigrammes (less than 40 centigrammes the litre), and that patients can scarcely support the tar-water unless it be diluted.

The irritation of the stomach often provoked by the tar-water of the Codex is prevented by the saccharate; the proportion being but 4 per cent., the acridity of the tar is covered. Another advantage, not less important, due to its pulverulent form, is that it avoids the necessity of swallowing a large quantity of liquid, since a glass of water is sufficient to dissolve several teaspoonfuls. The physician can thus augment the quantity of tar according to the necessities of the patient.

The pulverulent form has another valuable advantage. Patients who are unable to overcome the repugnance the odor and taste of tar often provoke, may enjoy the benefits of this therapeutic agent by making up the saccharate into a pill with unleavened bread.

Gay, speaking of the acridity and repulsive taste of oil of tar, recommended that it should be sweetened, "in order to mask its flavor and its odor." Sugar, as I have said, does not alter the therapeutic properties, but modifies its organic properties and facilitates its absorption. While retaining the odor and taste of the remedy, the saccharate so disguises them that the most delicate stomachs can bear it without repugnance.

The saccharate of tar is not the result of a chemical reaction; it is a simple mixture, each of the elements of which retains intact its composition and its properties. Constant in its composition, it will furnish solutions really and mathematically entitled to the name, being able to fulfil all the conditions necessary for mixtures, gargles, injections, etc., and enabling the physician to give his patient such quantity of tar as he may deem necessary.—*Pharm. Journ. and Trans., Sept.* 23, 1871., from *Journal de Pharmacie et de Chimie.*

THE COLLECTION OF MASTIC AT CHIOS.

By M. J. Leon Soubeiran.

Mastic flows from the *Pistacia Lentiscus*, a Terebinthaceous tree, growing principally in the south of the Isle of Chios, about Cape Mastic, which takes its name from this resin, and is situated about an hour's journey from the city of Chios. According to the natives it exudes, not only from artificial incisions, but also spontaneously from the branches, where it congeals in drops, which, under the name of *dakra* (tears), are gathered separately, and constitute the most esteemed kind. But the bulk of the resin issues from vertical incisions skilfully made with a knife close together round the whole circumference of the trunk, from the root to the branches. A few hours after this operation, which is done about the middle of June, there issues from the incisions a resinous, transparent, aromatic substance, which soon solidifies. After fifteen or twenty days this resin is collected in little baskets, lined with white paper or clean cotton cloths. Previous to this time the ground underneath the tree is covered so as to prevent the juice, which runs plentifully, from being soiled by the earth. If such contamination does take place, care is taken to cleanse it directly it is collected. The production of resin, which is collected by women and children, lasts about six months, and is valued at about £8 to £10 for a full-grown tree.

The mastic that exudes spontaneously is divided into two kinds,—the *kadisto*, which averages in value 100 Turkish piastres, the oke of 1200 grammes, and the *phliskari*, which has nearly the same value. That which drops from the incisions and is picked up from the ground is the *peetta*, worth 80 piastres the oke; whilst the worst quality, that which is mixed with earth, called *phluda*, is only worth from 40 to 60 piastres.

The annual production is about 2,000,000 drachms, and is attributed, by the natives of Chios, to the intervention of Saint Isidore, martyred in that island in the third century; the drops of blood of that martyr having given birth, they say, to the mastic tree.

In the East mastic is employed to strengthen the gums and to perfume the breath. It is at present little used in medicine, but principally in the arts, in the preparation of varnish.

A turpentine which has enjoyed a great reputation is also obtained at Chios, from the *Pistacia Terebinthus*, by means of more or less deep incisions in the trunks of the larger trees.—*Pharm. Journ. and Trans., Sept.* 16, 1871, from *Journ. de Pharm. et de Chimie.*

"CORRASSA COMPOUND."

By F. M. Goodman.

I noticed in a previous number of the *Pharmacist*, vol. 3, p. 69, a letter from a correspondent asking information upon the so-called "Corrassa Compound." Since then, being requested to prepare some from a sample, I made a superficial examination of the substance.

It is of a light fawn color, resembling Dover's Powder, thus dispelling the idea of its containing "extracts." An examination through a small microscope revealed three powders, of different colors and different degrees of division, and by using sieves of the requisite fineness, these were easily separated.

The first, passing through a No. 90 sieve, of a yellowish color, was unmistakably powdered gentian.

The second, much coarser, separated by a No. 60 sieve, was of a white color, and proved to be sugar.

The third, which remained in the sieve, was a little cochineal—probably added to color the mixture when taken in water.

As a result of the foregoing examination, the following approximate formula is given, in parts:

Powd.	sugar	24
"	gentian	8
"	cochineal	1

M.

This is about as harmless a preparation as is ever vended by self-styled doctors, charitable missionaries, etc. The above compound may be obtained of J. T. Inman, M. D., LL. D., etc., New York, at $3.00 an ounce.—*The Pharmacist, Sept.*, 1871.

Chicago, August, 1871.

IMPURITIES IN CHLORAL HYDRATE.

By Fred. Versmann, Ph. D.

In a discussion on chloral hydrate at the meeting of the Pharmaceutical Association at Edinburgh, attention was drawn to certain impurities, which greatly invalidate the application of the remedy, and hopes were expressed that the matter might be inquired into. I had lately occasion to inspect large quantities of such impure preparation, partly made by foreign manufacturers, but partly also by an English firm. The impurity is exactly the same in both cases,—most likely a result of the manufacturing process, and ought to be capable of being remedied. The impure hydrate gives off dense, strongly acid fumes as soon as the bottle is opened; these fumes affect the eyes and the skin most severely, to such extent that, on manipulating with about a cwt., the epidermis of the operator's hands was completely destroyed.

I purpose sending to the evening exhibition next week a sample of chloral hydrate in this state, and also another which I have succeeded in depriving of the objectionable character above mentioned. The question naturally arises, whether the formation of the foreign compound cannot be avoided. It is not hydrochloric acid, as has been suggested, but an organic chlorine compound (perhaps chlorpicrine) formed together with chloral, and not resulting from a decomposition of the latter. I first was under the impression the fumes were due to a small quantity of chloral, not hydrated, the strong penetrating smell of which is somewhat similar, but solution in water does not take away the strong smell. In a short time I hope to be able to state definitely the nature of this impurity.—

150 *Fenchurch Street, E. C., Sept. 26th*, 1871.

Pharm. Journ. and Trans., Sept. 30, 1871.

DETERMINATION OF CITRIC ACID.

By H. Kämmerer.

Soluble citrates mixed with acetate of baryta, either hot or cold, produce a white amorphous precipitate, being 3 BaO, 2 $C_{12}H_5O_{11}$, 3 HO+14 aq.

If, after precipitation, an excess of acetate of baryta be added, and the mixture heated in a water-bath, the precipitate becomes heavy and granular, it loses one-half of its water of crystallization, and has now the composition 2 BaO, 2 $C_{12}H_5O_{11}$, 3 HO+7 aq.

The presence of other organic acids does not interfere; the granular salt is absolutely insoluble in water, and citric acid may thus be easily determined. If the solutions are very dilute they must be concentrated by evaporation, after additions of acetate of baryta, or the precipitate will consist of crystalline needles containing only 5 aq.—*Pharm. Journ. and Trans. Oct.* 7, 1871, from *Zeitschr. für Analyt. Chemie*, viii. p. 298.

PREPARATION OF HYDROSULPHURIC ACID.

By John Galletly.

In making some experiments on the action of sulphur on paraffin, I have found that a mixture of these substances, either in equal parts or with a larger proportion of sulphur, when heated in a flask not greatly above the melting-point of the sulphur, begins to evolve hydrosulphuric acid, and continues to give off this gas steadily, while kept moderately heated, for a considerable time.

I have used this process repeatedly, and consider it the most convenient for laboratory use. With a round flask holding about a pound of the materials fitted with a tube bent at right angles about ½-inch bore and 12 to 18 inches long, containing a little loose cotton wool, and having a smaller tube fitted to the end of this for dipping into the liquid through which it is desired to pass the gas, a convenient stream can be obtained lasting several days. The production of the gas can be stopped and renewed at pleasure by withdrawing or applying the heat. An Argand lamp should be employed, or if a Bunsen is used, the top piece should be on the tube for spreading the flame, so as to avoid heating the flask on one spot. Heavy paraffin oil used for lubricating machinery can be substituted for the solid paraffin, and good results are also obtained with commercial stearic acid, but with the latter the tube conveying the gas soon becomes

covered with drops of a milky liquid, which is probably water and finely divided sulphur. With paraffin the tubes remain clear and bright, except for a little sulphur sublimate close to the neck of the flask.

I observe that Reinsch recommends a laboratory process for obtaining pure sulphhydric acid by heating in a glass flask equal parts of sulphur and suet. The recommendation does not seem to have been generally followed, but the advantages resulting from the substitution of paraffin for suet may lead to the more usual adoption of this process.

Addiewell Chemical Works, Sept. 4, 1871.

—*Chemical News, Oct. 5th,* 1871.

EXTRACTION OF ANIMAL FATS TO BE USED EITHER AS FOOD OR FOR COSMETIC PURPOSES.

By Dr. H. Vohl.

The fresh fat is first as much as possible freed from membranes and flesh, next cut up either into small discs or cubes, and then thoroughly washed with cold water (which should contain the least possible quantity of lime, therefore fresh river, or, better, good rain-water, should be used) until all blood is entirely removed. The fat is next put into a cylindrical stoneware vessel, 1·25 metres high and 0·5 metre inside diameter, this vessel being placed in a water-bath and provided with a tap at the bottom, so placed that the vessel may be emptied without removing it from the water-bath. The vessel having been filled for three-fourths of its capacity with fat, there is placed on the top of it a stoneware perforated disc, and next poured over it (the fat) very dilute pure hydrochloric acid—10 per cent. of the weight of the fat of an acid made up of 3 lbs. of chemically pure HCl at 1·12 sp. gr. to 100 lbs. of water (sulphuric acid is not to be substituted, because its solvent power for membranes is very slight). This having been done, the stoneware vessel is closed with a well fitting cover, and the water-bath heated. From the fat, while melting, the perforated cover carries, by slowly sinking downwards, all the impurities, as far as they are not dissolved by the acid, which at the end of the operation is run off by aid of the tap. The fat is then, while yet molten, washed several times with warm water, to which, for the last washing, some carbonate of magnesia is added. The acid liquid yields, along with phosphorite or other native phosphate of

lime, an excellent manure. The fat is next treated with Canada oil (a refined petroleum spirit), and the solution separated by decantation from any yet present nitrogenous organic matter (membranes, &c.). The solution of the fat is freed by distillation (in a water-bath) from the Canada oil, and the result is the production of a very superior fat, which, being absolutely free from water and other organic, especially nitrogenous matter, is not liable to become rancid, and may be preserved for many years. Although the process here briefly described may appear complicated, it yields not only a better, but also far larger quantity of product.—*Chem. News.*, from *Dingler's Polyt. Journ.*, *Aug.* 1*st*, 1871.

Varieties.

Crystallized Aconitine.—H. Duquesnel gives, in the first place, an exhaustive description on the best method of preparing aconitine in crystalline state for pharmaceutical purposes, and next a detailed account of the properties of the alkaloid alluded to. Crystalline aconitine, $C_{34}H_{40}NO_2$, is nearly insoluble in water, even at 100°; the substance is not volatile, but heated to above 130° is decomposed. Aconitine is soluble in alcohol, ether, benzine and chloroform; insoluble in glycerine and petroleum oils. Aconitine readily forms salts with acids, and is even soluble in water impregnated with excess of carbonic acid. Although phosphoric and tannic acids, as also the double iodide of mercury and potassium, are tests for aconitine, they are not reliable unless taken in combination with its physiological effects.—*Chem. News*, from *Compt. rend.*, *July* 17*th*, 1871.

Portable Mixtures.—A new method of administering medicines has been proposed in Sweden, and has come into extensive use in France in consequence of the advantages which it possesses. It is the employment of gelatine as a vehicle, of which Professor Almen, of Upsala, is the initiator. Six grammes of gelatine are dissolved in warm water, and the desired medicine is added to the solution, which is then turned out on a glass plate to solidify, evaporate and dry. This mass, which is about as thick as paper, is then divided into squares of such size as to contain the proper dose of the medicine. A slight addition of glycerine makes this preparation tough and flexible as paper. Insoluble agents are added to the gelatine solution by a thick emulsion of gum or tragacanth.

Morphia, emetics, acetate of lead, sulphate of copper, extracts of opium and belladonna and powders of digitalis, and camphor are thus easily kept ready in a portable form and administered when necessary.—*Medical Press and Circular, Sept.* 13, 1871.

Approximate Measurement.—Mr. E. B. Suttleworth, in the *Canadian Pharmaceutical Journal* for September, has an article on this subject in which he shows the absurdity of ordering potent medicines by drops; as dropped from vessels of different shape and size, he obtained for one fluid drachm of laudanum from 50 to 135 drops. He likewise examined the teaspoons as met with in commerce, and found them to be of three or four sizes, holding about 55, 75, 85 and 95 minims respectively. The dessertspoon, as now met with, holds 150 or 200 minims, and the tablespoon 4, 5 or 6 fluid drachms. The author recommends physicians always to specify the use of *small* spoons, when the possibility of giving an under dose is exceedingly remote, the chances still being that the quantity will be over the mark. The dessertspoon might well be abandoned entirely, as the measuring of two teaspoonfuls is almost as convenient and far more likely to be correct.

Glycerized Cotton for Dressing Wounds.—Professor Gubler, at a recent meeting of the Académie de Médecine, exhibited some specimens of wadding prepared by saturating it with a certain quantity of glycerine, which he had found to render it permeable to all medicinal liquids, without causing it to lose any of its suppleness and lightness. He suggested that in this state it might prove a useful substitute for charpie, in the event of a scarcity of that article. Dr. Delaborde has already employed it with advantage. In order to prepare this dressing, it is only necessary to pour a small quantity of glycerine over the square sheet of wadding, and afterwards express it as strongly as possible.—*Pharm. Journ. and Trans., Sept.* 30, 1871, from *Journ. de Pharmacie et de Chimie.*

Water unfrozen at a temperature of —18°*C.*—Boussingault finds that by preventing the dilatation of water, it may be kept unfrozen down to —18°C. He experimented with a gun barrel of steel, into which a steel ball was dropped before filling it with water. During the cold days of December 26, 27 and 30, last, the temperature fell to —12° and —18°, and yet on shaking the tube the ball was found to move freely, showing that the water was not frozen.—*Amer. Journ. Sci. and Arts, Oct.*, 1871, from *L'Institut, July* 12.

The Manufacture of Platinum.—As an item worthy of record amongst our mechanical news, we would notice the establishment in our country of a new manufacturing industry, namely, that of the manufacture from the raw material of platinum vessels, wire, etc., for the use of the chemist, and of those engaged in technical pursuits. For our supply of these materials we have been until the establishment of this enterprise, entirely dependent upon European makers. The establishment is now, we believe, successfully conducted, in New York, by Mr. H. M. Raynor, and we wish the undertaker of it success.—*Journ. Frank. Inst., Oct.*, 1871.

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*Simple Process for Nickel-Plating.**—Prof. F. Stolba communicates a plan

* Dingler's Polytechnisches Journal, cci, 145.

for nickel-plating, by the action of zinc upon salts of nickel in the presence of chloride of zinc and the metal to be coated. By this process, the author informs us, he has succeeded in plating objects of wrought and cast-iron, steel copper, brass, zinc and lead. It is only necessary that the size of the objects should permit them to be covered entirely by the plating liquid, and that their surfaces should be free from rust or grease. The following is the *modus operandi*:

A quantity of concentrated chloride of zinc solution is placed in a cleaned metallic vessel, and to this is added an equal volume of water. This is heated to boiling, and hydrochloric acid is added, drop by drop, until the precipitate which had formed on adding water has disappeared. A small quantity of zinc powder is now added, which produces a zinc coating on the metal as far as the liquid extends. Enough of the nickel salt (the chloride or sulphate answer equally well) is now introduced to color the liquid distinctly green; the objects to be plated are placed in it, together with some zinc clippings, and the liquid is brought to boiling.

The nickel is very soon precipitated, and in course of fifteen minutes, if the work has been properly performed, the objects will be found completely coated. The coating will vary in lustre with the character of the metallic surface; where this is polished the plating will he likewise lustrous, and *vice versa*.

Varying the process by the addition of a salt of cobalt, instead of nickel, will afford a cobalt plating, which, the author informs us, is steel grey in color, less lustrous and more liable to tarnish than the nickel.—*Journ. Frank. Inst., Oct.*, 1871.

Pharmaceutical Colleges and Associations.

The Chicago College of Pharmacy has lost everything it possessed, during the late disastrous fire, with the sole exception of its members. The cabinets, the library, the furniture of their hall, the "Pharmacist," even the private collections and apparatus of the Professors at the time stored in the building, have been burned. The course of lectures had been opened in the first week of October, and the prospects were bright for a full class, when the conflagration destroyed in a few minutes what had cost years of labor to build up. It is possible that, notwithstanding the calamity, the lectures may be resumed again during this winter; but, to assist the College and, if possible, to help the "Pharmacist" on its feet again, it is the plain duty of all subscribers to and advertisers in the latter to send in their dues for subscription and advertising without delay, and we appeal to all who may be indebted in this way to our young sister institution, to forward their dues to Prof. A. E. Ebert, corner of Twelfth and State streets, Chicago, who escaped the enormous destruction of property, and who will receive all moneys for the College.

Druggists, manufacturers, publishers and others, who are able to contribute specimens of drugs, chemicals, apparatus, or publications, have an opportunity of aiding the cause of pharmacy, if they will make such donations to the cabi-

nets and to the library. Since the College has lost everything, anything related to pharmacy as a trade or profession will be an acceptable and welcome gift.

Philadelphia College of Pharmacy.—The lectures in this institution have commenced under very favorable auspices, and the practical school is well attended. At a special meeting of the Board of Trustees, recently held, it was resolved, in case the Chicago College of Pharmacy should be unable to resume lectures during the coming winter, to tender to all matriculants of that College the matriculation ticket, and such lecture tickets as they may have there paid for, free of charge for the present session.

The movement inaugurated by this College to close dispensing stores earlier in the evening than heretofore (see p. 474 of our last number), resulted in several meetings of the pharmacists of this city; and, after canvassing the city, it was resolved to close dispensing stores at 10 o'clock P. M. A circular has been issued, inviting the co-operation of the public, by obtaining medicines required, and having old prescriptions renewed before that hour.

The Vermont Pharmaceutical Association held its second annual meeting, at Rutland, October 11th, and elected the following officers for the ensuing year: President, Fred. Dutcher, St. Albans; Vice-Presidents, Elam C. Lewis, Rutland, and M. K. Paine, Windsor; Secretary, Albert W. Higgins, Rutland; and Treasurer, Collins Blakley, Montpelier. Fourteen new members were elected. The Association appears to be in a sound condition, and to have awakened considerable interest in the cause of pharmacy throughout the State. It resolved at the last meeting to commence with the formation of a library.

Pharmaceutical Association of Allegheny County.—At a meeting of the pharmacists and druggists of Allegheny County, Pa., held on Thursday evening, September 28th, 1871, at the Western University building, in Pittsburg, Pa., a permanent organization was effected, to be known as the "Pharmaceutical Association of Allegheny County," by the election of the following named officers, viz.: Henry P. Schwartz, President; Newton McClarran and Harrison S. Lutz, Vice-Presidents; Joseph Abel, Recording Secretary; Alfred J. Rankin, Corresponding Secretary; Wm. H. Brill, Treasurer; James R. Clark, M. J. McGann and F. H. Eggers, Executive Committee.

The President afterwards appointed Committees on Ethics, Certificate of Membership, on Pharmacy. The regular meetings will be held, at the Western University building, on the evening of the first Thursday of each month.

The Louisville College of Pharmacy has organized its school, and will commence, during the month of November, its first course of lectures with the following faculty: Thos. E. Jenkins, M. D., Professor of Materia Medica; L. D. Kastenbine, M. D., Professor of Chemistry; and C. Lewis Diehl, Professor of Theory and Practice of Pharmacy.

The St. Louis College of Pharmacy, at the general meeting held in September, elected the following officers, namely: William N. Crawford, President;

Theodore Kalb, Vice-President; Edmund P. Walsh, Secretary; Charles L. Lips, Treasurer, and Arthur F. Hollister, Enno Sander, M. W. Alexander, Charles Habicht and J. C. Kirkbride, Board of Trustees. The following-named gentlemen were elected the Faculty of the College—the lectures to commence about the middle of November: Hugo Krebs, Professor of Chemistry; Enno Sander, Professor of Materia Medica; Justin Steer, Professor of Pharmacy.

New York College of Pharmacy.—At a meeting held Oct. 19th Mr. H. A. Cassebeer, Jr., was elected Secretary in place of Mr. E. L Milhau, resigned.

A Code of Ethics was then discussed and adopted, as follows:

Preamble.—The members of the College of Pharmacy of the City of New York, considering it necessary that some mutual understanding should exist in regard to the moral principles guiding them in their profession, hereby agree upon the following Code of Ethics:

1. We accept the U. S. Pharmacopœia as our standard and guide for all officinal preparations, and recognize a variance from its rules only in exceptional cases, where sufficient authority has proved some other process more reliable to attain the same end.

2. Although not a legitimate part of our business, custom and the necessity of the times warrant us in keeping on hand the patent medicines of the day; yet we earnestly recommend the propriety of discouraging their employment when called upon for an opinion of their merits.

3. We discountenance all secret formulæ between physicians and pharmacists, and consider it our duty to communicate such to each other when required.

4. We distinctly repudiate the practice of allowing physicians a percentage on their prescriptions; and we agree not to have a secret understanding with physicians, to the pecuniary detriment of the public.

5. We will endeavor, as far as lies in our power, to refrain from compromising the professional reputation of physicians, and we expect the same comity from them.

6. Since the professional training of the pharmacist does not include those branches which enable the physician to diagnose and treat disease, we should, in all practicable cases, decline to give medical advice, and refer the applicant to a regular physician.

7. The growing demands of the age require that those who follow the profession of pharmacy should be educated up to a higher standard. Therefore, we consider it our duty, individually and collectively, to encourage the advancement of knowledge in our profession generally, and particularly by stimulating our assistants to attend the lectures of the College, and by aiding and assisting them to do so.

8. Considering it expedient that some rule be adopted to enforce the provisions of our Code, we hereby agree, if any just cause of complaint be found against a member of this College of having violated the rules or the spirit of our Association, to bring the case before a special or the next general meeting of the College, when the accused, after being heard in his own defence, may be expelled by a two-thirds vote.

Cincinnati College of Pharmacy.—At a meeting of pharmacists, held, on the 20th of October, in the lecture-room of the Cincinnati Dental College, Professor Edward S. Wayne was called to the chair, and Mr. Wm. H. Adderley appointed Secretary *pro temp.* A committee, consisting of Prof. Wayne and Mr. Tully, was appointed to select suitable rooms.

At a second meeting, held Oct. 24th, it was resolved not to re-organize under

the charter granted in 1850, but to form a new society. A consitution and by-laws were adopted, and the following officers elected: President, Prof. E. S. Wayne; Vice-Presidents, J. F. Judge and A. Fennel; Recording Secretary, Wm. H. Adderley; Corresponding Secretary, A. J. Tully; Treasurer, W. H. Negley; Trustees, Ayers, Taxis, Schmidt, Reum, Koehler.

The California Pharmaceutical Society held its third annual meeting last month.

After the reading of the reports of committees, the following officers were elected: President, J. A. Bauer; Vice-Presidents, E. Painter and Wm. Geary; Recording Secretary, W. E. Mayhew; Corresponding Secretary, W. T. Wenzell; Treasurer, Wm. J. Bryan; Executive Committee, J. G. Steele, John Calvert, W. E. Mayhew, Wm. Simpson and W. T. Wenzell.

Reports were submitted on a number of queries, from which it appears that no attempt has been made toward the manufacture of cod liver oil in California, also that rhubarb is not cultivated there. Mr. Calvert reported in favor of reducing the strength of fluid extracts to one-half of their present pharmacopœial standard.

Mr. Wenzell read a paper on "Ergotina," describing at some length the intricate processes necessary for its extraction.

On motion of Mr. Searby, the following was adopted:

Resolved, In view of the recent calamity which has befallen the city of Chicago, we hereby appoint a Committee to solicit subscriptions from the members of this Society, the same to be forwarded to the Treasurer of the Chicago College of Pharmacy, for the immediate relief of any of their members who may have suffered by the recent fire in that city.

The Soliciting Committee are Messrs. Searby, Mayhew, Calvert and Steele.

Many expressions of sympathy for their brethren, and particularly for the Chicago College of Pharmacy, were advanced by various gentlemen present, and warmly endorsed by the meeting.

Minutes of the Pharmaceutical Meetings.

The first meeting of the session 1871–72 was held, at the College hall, on the afternoon of Tuesday, Oct. 17th, 1871.

Prof. Bridges presided, and in the absence of the Register, S. Mason McCollin was appointed *pro tempore*.

It being the usual time for the annual election of Register, Mr. Clemmons Parrish was unanimously elected for the ensuing year.

Prof. E. Parrish presented, on behalf of S. Maw, Son & Thompson, of London, one of their improved suppository moulds, and also suppositories made in the same. These weigh only 15 grains, the usual rectum suppository in this country weighing 25 grains. Some remarks were made by members present on the relative advantages of suppository moulds which are solid and those which open by a hinge, as in the case of Maw's. In the use of the solid moulds, perfect refrigeration by ice-water should *precede* the pouring in of the melted cacao

butter, and where this is the case there will seldom be any difficulty in dropping out the hardened cone after a very few minutes.

A mould was also exhibited, made by A. H. Wirz, of this city, which opens near the apex of the cone, so as to allow pressure upon the point of the suppository in its removal. This was objected to by those who had tried a similar device, as blunting the end of the suppository, and often proving ineffectual in its removal. Prof. Parrish exhibited an improvement on the ordinary method of adjusting the solid moulds in the refrigerating tray; twelve of the moulds are soldered on to a tin diaphragm, which is suspended near the top of the vessel containing the ice, and four handles being soldered on the opposite side of the diaphragm, by inverting and dropping it the suppositories may all be dropped out together. This obviates the necessity of handling the moulds singly, and facilitates the rapid preparation of suppositories.

He also exhibited a material made of glycerin and gelatin, which possesses a consistence suited to suppositories and is at the same time soluble in the fluids of the vagina or lower intestine. It is used in England in certain cases in which a soluble suppository would be preferable to an oily one. Two disadvantages have been observed in this material. It appears rather elastic and flexible for easy introduction by pressure, and where tannin is present in the medicinal ingredients, it is liable to form the insoluble and nearly inert tannate of gelatin.

Suppositories being under discussion, several methods of introducing extracts into the cacao butter were spoken of. Charles Bullock stated that it was the practice of some to thrust a small cylinder into the plain suppository, on withdrawing which an opening is left, into which the medicinal ingredient can be dropped. This is not, however, a desirable method, in view of the fact that the extract is not in this way diffused, but remains in a comparatively insoluble mass. Prof. Parrish exhibited some suppositories of extract of hyoscyamus which he had prepared by a process communicated to him by Prof. Israel J. Grahame. The extract, being softened with a little water, is triturated on the ointment slab with the melted cacao butter, as if an ointment were to be made It is then returned to the capsule, and *very gently* warmed, if necessary, before being poured into the moulds. Great care is necessary not to render the cacao butter too fluid, in which case the suppositories poured last would contain an undue share of the extract. Prof. Grahame has used a similar process very successfully in making assafœtida suppositories. James T. Shinn spoke of this process as according substantially with his own in manipulating with the extracts.

Prof. Maisch exhibited specimens of cundurango, and gave a history of its introduction into the States; also mezquite gum, and the fruit of the tree, *Algarobia glandulosa*, brought from Western Texas; also the seeds of *Strychnos potatorum*, obtained from the Curator of the Pharmaceutical Society of London, and which prove to be identical with those he exhibited and experimented upon at a previous meeting; also the "Japanese Cinnamon Root," which is believed to be used to adulterate powdered cinnamon.

Specimens were presented, from Henry Cramer, of a bark believed to be that of *Dicypillium caryophyllatum*, or South American Clove Tree; also a plant of *Viscum album*, Mistletoe, found in the midst of a case of imported herbs.

Editorial Department.

The Suffering Pharmacists of Chicago and the Northwest.—The disastrous conflagration of the 8th and 9th of October, which laid the entire business portion of Chicago in ashes, destroyed a large number of dwellings and rendered about 100,000 people homeless, has fallen very heavily upon the Chicago College of Pharmacy and upon all the pharmacists located in the burned district, which embraces the entire North Division and the South Division north of Harrison street, the West Division having suffered comparatively little. Many of our pharmaceutical brethren have lost all—their business and their home; the result of years of unceasing anxiety and toil has been swept away by that dire calamity, and the sufferers have to begin life anew upon the ruins of their once cherished homes. The tearful eye looks with sadness upon the heaps of ashes, all that is left now of thousands of cheerful homes and thriving business places; but at the same time a hope is kindled in the breast, that the future may again bring days of bright sunshine, and the buoyant energy of those pioneers in the Western prairies dictates that the young giant of the shores of Lake Michigan shall rise again. A generous charity has opened the hands and pockets of all more fortunate cotemporaries; quiet and unpretending have been the offerings of the druggists and pharmacists in the different sections of our country to assist their unfortunate confreres of Chicago; whether located in cities, towns or villages, they cheerfully extend their helping hand; even the shores of the Pacific, though separated by thousands of miles, are vieing with the older sections, and have already sent substantial aid. As Chicago will rise again from her ashes, so will her druggists and pharmacists again resume their position among the most enterprising and energetic of the fraternity, and the now bleeding wounds will gradually heal.

In the meantime, it is to be hoped that the generous and more fortunate members of our profession will not relax their efforts to lighten the misfortune of their suffering brethren in Chicago.

The opportunity to do good by voluntary contributions, the offering of loans, the extension of credit, &c., is probably also offered in those districts of Michigan, Wisconsin and Minnesota which have, about the same time, been visited by prairie and forest fires, destroying a number of villages and towns, and with them, undoubtedly, the property of many pharmacists. We repeat, do not relax the efforts to lighten the misfortune of our suffering brethren.

Pharmaceutical Education and the Michigan University School of Pharmacy.—The report of the nineteenth annual meeting of the American Pharmaceutical Association published in our last number, contains a full account of the action relative to the delegation from the School of Pharmacy of the Michigan University; the delegate was not received as such, although he was admitted as a member.

We have received a reprint from the Michigan University Medical Journal and Pharmaceutical Quarterly, wherein an attempt is made to criticize this action of the Association; but this attempt is quite abortive, since the main

question at issue is completely dodged therein. The question was *not* whether a good scientific education, acquired previous to entering a pharmacy as apprentice, was desirable or not; but the question *was* whether, without shop training, any institution of learning is warranted to confer upon a young man a pharmaceutical degree; and it is such unwarrantable procedure that the Association entered its protest against, by refusing representation from the Michigan University School of Pharmacy.

Professor Prescott must know this, for he was present during the deliberations of the Committee to whom his case was referred; and he was present when, after the reading of his (Prof. P.'s) paper, Professor Maisch made substantially the same statement. The latter did not say that several Colleges of Pharmacy were *endeavoring* to furnish some laboratory facilities, but that several (we know of three) actually have done so.

According to the advertisement, the course in practical pharmacy at the institution in question comprises pharmaceutical operations (four hours daily) for four or five months, including work in specific gravity, distillation, volumetric tests of drugs and chemicals, and the preparation of sixty to seventy pharmacopœial *samples*. (Italics our own.) Now, we contend that all this is not equivalent to four years' practice behind the counter. While we acknowledge that the subjects of instruction of the Michigan School are very desirable subjects of the preliminary education of young men preparing themselves for the responsible duties of the pharmacist, we cannot withhold our conviction that all the facilities offered by the Michigan School, including the "working with willing classes at the blackboard during the mornings, from October to July," will be and are insufficient to make their graduates pharmacists, unless they have had the requisite practical training previous to entering upon their collegiate course there, or else seek the same after its completion. In the former case, they may well deserve the title "Pharmaceutical Chemist" conferred upon them; in the latter case, they will doubtless soon become convinced that though "Chemists," there was but a smattering of the "Pharmaceutical" connected with the real value of the title, at the time of receiving the same. Nobody can become proficient in any trade or science without practically working therein.

The deficiencies in the scientific education of our young pharmacists are well known to the Colleges of Pharmacy, and they are earnestly endeavoring to unite their efforts in the task to remedy them. In this movement we think that college will continue to participate, whose delegates, Professor Prescott says, "were first* and most persistent against us," and who "represent a school (Chicago) which has given but one course of lectures;" also the other college which "was most loudly toasted in the meeting and its banquets," and which "has suspended all instruction for the last two years, and is uncertain when it may resume lectures."

In view of all this, we hope it may be a long while before "a change of this clause of the Constitution will be demanded" and carried, so as to recognize delegates from any institution of learning professing to create pharmaceutical

* Professor Maisch, of Philadelphia, raised the first objection against his admission as a delegate.

chemists, or to confer similar titles without demanding pharmaceutical experience.

The Traffic in Diplomas, which we have repeatedly referred to in our columns, will probably hereafter cease to reflect upon the fair fame of the learned institutions of Philadelphia. That no degree could ever be purchased from the University of Pennsylvania is well known to all who are acquainted with its officers and teachers. Outside of the City and State, and particularly in Europe, this institution has often been confounded with the "University of Philadelphia." For the benefit of those of our exchanges who have charged the former with this nefarious traffic, we publish the circular lately issued by it, which contains also the law that will probably put a stop to this trade:

University of Pennsylvania, *Philadelphia, Sept.*, 1871.

Frequent applications are made to the authorities of this University by gentlemen who desire to obtain Honorary Degrees. As these applications are made in evident ignorance of the rules which govern the University in conferring these degrees, as well as the law of the State of Pennsylvania on the subject, it has been thought best to reprint the existing regulations:

[*Extract from the Statutes of the University.*]

Of Honorary Degrees in Divinity, Law, Arts and Medicine.

1. These may be conferred either at the instance of the Faculty, or in pursuance of a resolution of the Board of Trustees; but no such Degree shall be conferred unless the *mandamus* ordering the same to be signed by two-thirds of the whole number of Trustees, nor unless the candidate shall have been nominated at the Board three months previously to taking the question on conferring the degree.

2. The question on conferring an Honorary Degree shall always be decided by ballot, and the candidate must receive a unanimous vote.

An Act to Prohibit the Sale of Academic Degrees.

Section 1. *Be it enacted by the Senate and House of Representatives of the Commonwealth of Pennsylvania, in General Assembly met, and it is hereby enacted by the authority of the same,* That it shall not be lawful for any University, College, or other institution incorporated under the laws of this State with power to grant Academic Degrees, honorary or otherwise, to confer the same upon any person or persons upon the payment or promise of payment by any person in consideration thereof; and any person knowingly signing a diploma or other instrument of writing purporting to confer an Academic Degree when such consideration has been paid or promised to be paid, shall be guilty of a misdemeanor, and on conviction thereof be sentenced to pay a fine not exceeding five hundred dollars, and to undergo an imprisonment not exceeding six months, or both, or either, at the discretion of the Court.

Approved May 19th, 1871.

After the above was in type we received the New York *Tribune* of October 25th, in which a lengthy account is given of the negotiations for the purchase of a diploma from the Eclectic Medical College of Philadelphia.

Coca, Cocoa, Cacao.—The products of these three plants are very often confounded with each other in consequence of the similarity of their names; aside from this, there is no other resemblance either between the plants, or their products used in medicine, the arts or the cuisine. In the March number of this Journal we published a review of Wittstein's handbook of secret medi-

cines, wherein a nostrum was stated to be composed of the powder and the extract of coca. Some of our contemporaries improved on that report and made the nostrum from cocoa. The oil of theobroma, at present the favorite excipient for suppositories, is very frequently called cocoa butter, perhaps because some well known dietetic preparations of the so-called chocolate nuts have been misnamed cocoa.

Erythroxylon Coca, Lamb., grows in South America and belongs to the order erythroxylaceæ. The leaves are used by the Indians and are capable of sustaining their strength, without any other food, on long and tedious journeys and during great exertions.

Cocos nucifera, Lin., is a palm, growing in tropical countries and furnishing the well-known cocoanut with its refreshing milk, and yielding the cocoanut oil or cocoanut butter, a solid white fat largely used in the manufacture of candles and soap.

Theobroma cacao, Lin., and a few other species of the natural order of Byttneraceæ, natives of Central and South America, produce seeds, known in commerce as chocolate nuts. The fat expressed from them is the officinal cacao butter, the mass left in the press constitutes the main ingredient of chocolate.

Strychnos Potatorum.—On page 241 of this volume of the Journal we described among others, the seeds of a species of strychnos, which a year ago arrived at New York as ballast in a ship from the East Indies. We concluded from our investigations, that they belonged to Strychnos potatorum, *Lin. fil.*, and we are now enabled to verify this opinion. Professor W. H. Chandler, of the Lehigh University at Bethlehem, Pa., handed us a parcel of authentic seeds of that plant from Mr. James Collins, curator of the museum of the Pharmaceutical Society of London; the seeds received are identical with those mentioned before. We are under obligations to both gentlemen for the kindness shown us.

Cundurango.—We have hitherto refrained from giving to our readers the glowing accounts of the efficacy of this wonderful humbug, simply because we looked with suspicion upon its introduction into the list of standard materia medica as an unfailing specific in cancer. The most surprising feature of its history has been the manner in which the State department has been used as the tool to advertise it as a nostrum. That it does not cure cancer has been proven by the medical profession of Washington, D. C.; several of the patients who improved under its use, have subsequently convalesced into the grave, and the others are about the same as before they commenced using it.

The first authentic news of its origin which we have seen, is contained in the communication from Mr. Dan. C. Robbins, published elsewhere. From Dr Fred. Hoffmann, of New York, we have received substantially the same information, accompanied by some specimens, one of which is identical with a specimen received from Professor Jos. Carson, of this city, which had reached him from the State department through Prof. Henry, of the Smithsonian Institution, and was, therefore, some of the original cundurango that reached this country. Dr. Hoffmann informs us that almost weekly, shipments of this drug arrive at

New York from Guayaquil, Ecuador, many of which are not genuine; they may probably be identical with the "big fruit" and "little fruit" mentioned by Mr. Robbins. The reduction in price from $100 to $30 per lb. may be partly due to the increased supply, partly to the counterfeit article. We presume that the market will soon be "overstocked" and remain in that condition.

Students Materia Medica Cabinets.—A practical and sound knowledge of the articles of materia medica can only be obtained by the repeated examination of the drugs, and the zealous student usually makes for himself, on a small scale, collections of specimens of the most important articles, presenting their characteristics. We were pleased, on learning recently, that the late John D. Owen, while a student of the Philadelphia College of Pharmacy made such a collection, and left it at his boarding house for the use of pharmaceutical students coming there after him. The rooms have again been engaged by members of the present class, and they propose to add to this collection and leave it again for the benefit of those who may come to the same place next year. A very laudable object, deserving of imitation.

The Influence of Forests upon Climate is generally acknowledged, but their preservation, or rather their judicious culture has as yet received scarcely any attention on this continent. The scarcity of timber in districts which, not many years ago, furnished large quantities, and the necessity of obtaining suitable material from more distant regions, is sufficient proof thereof. The traveler often notices mere sickly remnants of what once used to be large forests, and occasionally a range of barren rocky hills may be seen with no other vegetation besides briers, huckelberries, ferns and other noxious weeds, with perhaps an occasional forest tree of dismal aspect and unhealthy growth in its lonely position. The proprietors of a large tract of land in Schuylkill County, Pa., have engaged a gentleman who has made forest culture his special study, and we have been told that they are highly satisfied with the pecuniary and general results obtained in a few short years. The subject, however, is of national importance and deserves the careful attention of all. The following, which we copy from the *Pharm. Journal and Transactions of Sept. 2d*, claims, for the above reasons, the attentive perusal of every citizen:

The influence of forests upon the climate of a country, and the relation of the vegetation to the local peculiarities of a district, has often been observed. A fresh illustration is to be found in the Italian province of Oneglia, where for the last two years the olive crop has suffered from drought. It has been noticed that in recent years the rain that has fallen on this coast has been much less in quantity than formerly; and olive plantations, which were considered safe and lucrative property, are now looked upon as a bad speculation. The want of rain is generally attributed to the reckless way in which the mountains above the oil range have, especially of late years, been cleared of the forests which clothed them. From time immemorial the wood has been cut without any system of replantation; but, until about twenty years ago, there being no very great demand, and the mountains being utterly without roads, the quantity brought down to the coast was not large. Since that time the country has been opened up to a certain degree by roads, there has been an enormously increased demand for beech and oak for shipbuilding and chestnut for housebuilding, and some of the woods have been absolutely swept away without a tree being left. A society has been formed, having for its object to stop these reckless cleanances, and to induce proprietors to replace, by degrees, the timber in those positions which do not allow of tillage.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

The Physician's Dose and Symptom Book; containing the doses and uses of all the principal articles of the materia medica and officinal preparations; also tables of weights and measures, rules to proportion the doses of medicines, common abbreviations used in writing prescriptions, table of poisons and antidotes, index of diseases and treatment, pharmaceutical preparations, table of symptomatology, outlines of general pathology and therapeutics. By Joseph W. Wythes, M. D., &c. Tenth edition. Philadelphia: Lindsay & Blakiston. 1871. 16mo, 277 pages. Price, in cloth, $1.00; in leather, tucks, with pockets, $1.25.

That the work before us, which is evidently intended as an aid to the student and a pocket companion for the general practitioner, has been well received by the medical profession, is evidenced by the various editions through which it has passed, the last one being enlarged by several useful additions. In some instances the author has sacrificed clearness to brevity. For instance, on page 12 we find, as the antidote to alkalies and their salts, the vegetable acids mentioned; alkalies and their carbonates are intended, for acids would certainly not be advised against excessive doses of nitrate of potassa, for example. Under the head of opium and other narcotics the antagonistic effects of opium and belladonna deserved to be mentioned. Nux vomica and strychnia are not enumerated among the poisons.

The word aconitum (page 37), instead of aconitia, is doubtless an error attributable to oversight. On page 61 it is stated that *Cocos butyracea* is the plant which affords palm oil and cocoa butter, and that this "is used as an excipient for suppositories and medicated pessaries." Here the author confounds two entirely different fats. *Cocos nucifera*, Lin., yields palm oil, sometimes also called cocoa butter, which, however, is perhaps never used in medicine in this country. The seeds of *Theobroma cacao*, Lin., the so-called chocolate nuts, furnish cacao butter (often incorrectly termed cocoa butter), which constitutes the base of suppositories.

Aside from these few imperfections the book will prove very useful to those for whom it is intended.

Medical Education in America; being the annual address read before the Massachusetts Medical Society June 7, 1871. By Henry J. Bigelow, M. D., Professor of Surgery in Harvard University. Cambridge: Welch, Bigelow & Co. 1871. 8vo, 83 pages.

An excellent essay on the subject of medical education. The facilities of European universities are described, and their requirements compared with the actual and imperative demands of this country. The address closes with an account of the changes adopted in the medical instruction in Harvard University. We heartily commend this book to the careful perusal of every friend of progress in the instruction of medical and also pharmaceutical students; for much that we find mentioned here applies with equal force also to the young pharmacist.

Essentials of the Principles and Practice of Medicine. A handbook for students and practitioners. By Henry Hartshorne, A. M., M. D., Professor of Hygiene in the University of Pennsylvania, &c. Third edition. Thoroughly

revised. Philadelphia: Henry C. Lea. 1871. 12mo, 487 pp. Price, in cloth, $2.38; half-bound, $2.63.

After an introductory chapter entitled Systems of Medicine, the author treats in Part I of the Principles of Medicine, and then in Part II, on about 300 pages, of Special Pathology and Practice. The diseases are conveniently classified; symptoms, causation, diagnosis, prognosis and treatment are carefully considered; the whole being marked by briefness but clearness of expression. An enumeration of the numerous remedies proposed by different practitioners for the various diseases has been carefully avoided, the author mainly relying upon the practical experience gathered by himself and others at the bed-side. Over 250 formulas are appended, intended as examples merely, not as guides for unthinking practitioners. A complete index facilitates the use of this little volume, in which all important remedies lately introduced, such as chloral hydrate and carbolic acid, have received their full share of attention.

The Druggist's General Receipt Book; comprising a copious veterinary formulary; with numerous recipes in patent and proprietary medicines, druggists' nostrums, &c.; perfumery and cosmetics; beverages, dietetic articles and condiments; trade chemicals, scientific processes, and an appendix of useful tables. By Henry Beasley. Seventh American, from the last London edition. Philadelphia: Lindsay & Blakiston. 1871. 8vo, 497 pages. Price, $3.50.

The scope of this work is indicated by its title. It makes no scientific pretensions, but aims to be thoroughly practical. The information it imparts is such as will be of great value to the pharmacist and druggist, but few of the receipts being obtainable from the standard pharmaceutical works of more scientific claim. The language is terse and clear, and the general "getting up" of the book quite creditable.

Clinical Examination of Urine; with a description of a convenient apparatus for its speedy analysis. By Reuben A. Vance, M. D. Reprinted from the Medical World, Sept., 1871. New York: Wm. Baldwin & Co.

This little pamphlet describes, upon 10 pages, the tests to be applied by the physician for ascertaining approximately the most important constituents of morbid urine.

On Syphilitic Epilepsy. By Reuben A. Vance, M. D., &c. Reprinted from the American Journal of Syphilography and Dermatology, July, 1871., New York: F. W. Christern. 8vo, 15 pp.

The essay relates the experience of the author, who is attending physician for diseases of the nervous system at the out-door department of Bellevue Hospital.

OBITUARY.

Dr. Schacht died in Berlin, Germany, on the 20th day of June last, after a long and severe illness. The deceased was a pharmacist, and had served for a long time in Prussia as a member of the professional commission for pharmaceutical affairs.

Dr. G. C. Von Kaiser, professor of chemistry and technology in the University and in the Polytechnic Institute at Munich, Germany, died there August 28th, in the 69th year of his age. He had been educated a pharmacist, and acted as assistant to Prof. Buchner, Sen., when a professorship was tendered him at the Chirurgical Institute at Landshut, whence he was called to Munich.